IN THE CLAIMS

This listing of the claims replaces all prior versions of the claims in the application. Note that claim 3 has been newly canceled, without prejudice or disclaimer.

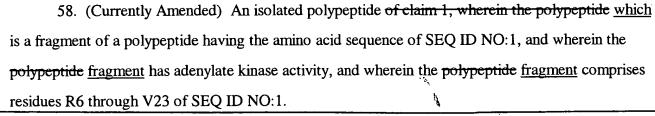
- 1. (Currently Amended) An isolated polypeptide selected from the group consisting of:
- a) a polypeptide comprising the amino acid sequence of SEQ ID NO:1,
- b) a polypeptide comprising a naturally occurring amino acid sequence at least 95% identical to the amino acid sequence of SEQ ID NO:1, wherein the polypeptide has adenylate kinase activity, and
- c) a fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, wherein the fragment has adenylate kinase activity binds mononucleotides, and wherein the fragment comprises residues R6 through V23 of SEQ ID NO:1.

2.-8. (Canceled)

- 9. (Withdrawn) A method for producing a polypeptide of claim 1, the method comprising:
- a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and
 - b) recovering the polypeptide so expressed.
- 10. (Withdrawn) A method of claim 9, wherein the polypeptide has the sequence of SEQ ID NO:1.



- 17. (Original) A composition comprising a polypeptide of claim 1 and a pharmaceutically acceptable excipient.
- 18. (Original) A composition of claim 17, wherein the polypeptide has an amino acid sequence of SEQ ID NO:1.
 - 19. (Canceled)
- 20. (Withdrawn) A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising:
 - a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
 - b) detecting agonist activity in the sample.
 - 21.-55. (Canceled)
- 56. (Previously Presented) An isolated polypeptide comprising the amino acid sequence of SEQ ID NO:1.
- 57. (Previously Presented) An isolated polypeptide of claim 1, wherein the polypeptide comprises a naturally occurring amino acid sequence at least 95% identical to the amino acid sequence of SEQ ID NO:1, and wherein the polypeptide has adenylate kinase activity.





59. (Previously Presented) A composition comprising the polypeptide of claim 56 and a pharmaceutically acceptable excipient.

60. (Previously Presented) A composition comprising the polypeptide of claim 57 and a pharmaceutically acceptable excipient.



- 61. (Currently Amended) A composition comprising the polypeptide of claim [[58]] <u>69</u> and a pharmaceutically acceptable excipient.
- 62. (Withdrawn) A method of screening a compound for effectiveness as an antagonist of a polypeptide of claim 1, the method comprising:
 - a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
 - b) detecting antagonist activity in the sample.
- 63. (Withdrawn) A method of screening for a compound that specifically binds to the polypeptide of claim 1, the method comprising:
- a) combining the polypeptide of claim 1 with at least one test compound under suitable conditions, and
- b) detecting binding of the polypeptide of claim 1 to the test compound, thereby identifying a compound that specifically binds to the polypeptide of claim 1.
- 64. (Withdrawn) A method of screening for a compound that modulates the activity of the polypeptide of claim 1, the method comprising:
- a) combining the polypeptide of claim 1 with at least one test compound under conditions permissive for the activity of the polypeptide of claim 1,
- b) assessing the activity of the polypeptide of claim 1 in the presence of the test compound, and

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c) comparing the activity of the polypeptide of claim 1 in the presence of the test compound with the activity of the polypeptide of claim 1 in the absence of the test compound, wherein a change in the activity of the polypeptide of claim 1 in the presence of the test compound is indicative of a compound that modulates the activity of the polypeptide of claim 1.

- 65. (Withdrawn) A method of preparing a polyclonal antibody which specifically binds to the polypeptide of claim 1, the method comprising:
- a) immunizing an animal with a polypeptide consisting of the amino acid sequence of SEQ ID NO:1, or an immunogenic fragment thereof, under conditions to elicit an antibody response,
 - b) isolating antibodies from the animal, and
- c) screening the isolated antibodies with the polypeptide of claim 1, thereby identifying a polyclonal antibody which specifically binds to the polypeptide of claim 1.
- 66. (Withdrawn) A method of making a monoclonal antibody which specifically binds to the polypeptide of claim 1, the method comprising:
- a) immunizing an animal with a polypeptide consisting of the amino acid sequence of SEQ ID NO:1, or an immunogenic fragment thereof, under conditions to elicit an antibody response,
 - b) isolating antibody producing cells from the animal,
- c) fusing the antibody producing cells with immortalized cells to form monoclonal antibodyproducing hybridoma cells,
 - d) culturing the hybridoma cells, and
- e) isolating from the culture monoclonal antibody which specifically binds to the polypeptide of claim 1.
- 67. (Withdrawn) A method of detecting the polypeptide of claim 1 in a sample, the method comprising:
- a) incubating an antibody which specifically binds to the polypeptide of claim 1 with the sample under conditions to allow specific binding of the antibody and the polypeptide, and

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b) detecting specific binding, wherein specific binding indicates the presence of the polypeptide of claim 1 in the sample.

- 68. (Withdrawn) A method of purifying the polypeptide of claim 1 from a sample, the method comprising:
- a) incubating an antibody which specifically binds to the polypeptide of claim 1 with the sample under conditions to allow specific binding of the antibody and the polypeptide, and
 - b) separating the antibody from the sample and obtaining the purified polypeptide of claim 1.



69. (New) An isolated polypeptide of claim 1, wherein the isolated polypeptide is a fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, and wherein the fragment binds mononucleotides, and wherein the fragment comprises residues R6 through V23 of SEQ ID NO:1.